

CLAIMS

What is claimed is:

1. A data center, comprising:
a first tier comprising a first server;
a second tier coupled to the first tier, the second tier comprising a second server;
and
a third tier coupled to the second tier, the third tier comprising a third server,
wherein at least one of the first server, the second server and the third server
handles a plurality of different traffic types over a single fabric.
2. The data center according to claim 1, wherein the first server handles at
least network traffic and direct attached storage (DAS) traffic over the single fabric.
3. The data center according to claim 1, wherein the first server uses a single
controller for handling at least network traffic and DAS traffic.
4. The data center according to claim 1, wherein the second server handles
at least two of network traffic, storage traffic and cluster traffic over the single fabric.
5. The data center according to claim 1, wherein the second server uses a
single controller for handling at least two of network traffic, storage traffic and cluster
traffic.
6. The data center according to claim 5, wherein storage traffic comprises
traffic from a redundant-array-of-independent-disks (RAID) configuration or traffic from
storage devices accessible via a network.

7. The data center according to claim 1, wherein the second tier comprises an application tier.

8. The data center according to claim 1, wherein the third server handles at least two of network traffic, storage traffic and cluster traffic over the single fabric.

9. The data center according to claim 1, wherein the third server uses a single controller for handling at least two of network traffic, storage traffic and cluster traffic.

10. The data center according to claim 1, wherein the single fabric is based upon a layer 2 (L2) protocol.

11. The data center according to claim 1, wherein the single fabric is based upon an Ethernet.

12. The data center according to claim 1, wherein the single fabric is based upon a transport/network protocol.

13. The data center according to claim 12, wherein the transport/network protocol comprises a transmission control protocol/Internet protocol (TCP/IP).

14. The data center according to claim 1, wherein at least one of the first server, the second server and the third server uses an Internet small computer system interface (iSCSI) protocol in communicating with storage.

15. The data center according to claim 14, wherein the iSCSI protocol runs on top of TCP/IP.

16. The data center according to claim 14, where in the iSCSI protocol runs on top of remote direct memory access protocol (RDMA).

17. The data center according to claim 1, wherein at least one of the first server, the second server and the third server uses an RDMA for interprocess communication.

18. A server, comprising:
an integrated chip;
an Ethernet connector coupled to the integrated chip,
wherein the Ethernet connector and the integrated chip can handle a plurality of different types of traffic.

19. The server according to claim 18,
wherein the server comprises a blade server, and
wherein the integrated chip is part of a blade mounted in the blade server.

20. The server according to claim 18, wherein the server has a single Internet protocol (IP) address.

21. The server according to claim 18, wherein the server is part of a data center.

22. The server according to claim 18, wherein the Ethernet connector handles the plurality of different types of traffic over a single fabric.

23. The server according to claim 18, wherein the Ethernet connector comprises a single Ethernet connector.

24. The server according to claim 18, wherein the integrated chip comprises a single integrated chip.

25. The server according to claim 18, wherein the plurality of different types of traffic comprises at least two of network traffic, storage traffic, interprocess communication (IPC) traffic and cluster traffic.

26. A method for communicating with a server, comprising:
(a) using a single fabric for a plurality of different types of traffic; and
(b) handling the plurality of different types of traffic via a single layer 2 (L2) connector of the server.

27. The method according to claim 26, wherein the single fabric comprises an Ethernet-based fabric.

28. The method according to claim 26, wherein the single fabric comprises a transport protocol/network protocol-based fabric.

29. The method according to claim 26, wherein (b) comprises accessing a storage device via the single L2 connector.

30. The method according to claim 26, wherein (b) comprises accessing a cluster via the single L2 connector.

31. The method according to claim 26, wherein (b) comprises accessing a network via the single L2 connector.

32. The method according to claim 26, wherein (b) comprises handling the plurality of different types of traffic via an Ethernet connector of the server.

33. A method for communicating in a data center, comprising:

- (a) accessing a storage system over a single fabric;
- (b) accessing a cluster over the single fabric; and
- (c) accessing a network over the single fabric.

34. The method according to claim 33, wherein (a), (b) and (c) are performed over a single Ethernet connector of a server in the data center.

35. The method according to claim 33, wherein the single Ethernet connector has a single Internet protocol (IP) address.